

THE APPLICATION OF THE GENERIC NAME *MACROPUS* SHAW  
1790 AND OF OTHER NAMES COMMONLY REFERRED TO  
THE GREY KANGAROO

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There has been considerable discussion in recent years as to the identity of the kangaroos collected in the vicinity of the Endeavour River, north-east Queensland in 1770 by Captain James Cook's party. Three specimens were obtained, weighing respectively 8, 38 and 84 pounds. From an account of this material, Muller (1776) described the kangaroo (*Mus canguru*) mentioning only the 38 pound specimen. This is the holotype of *Mus canguru* Muller and it has been generally accepted that the specimen was a grey kangaroo.

Iredale and Troughton (1925), as a result of examining the description contained in Solander's unpublished manuscript (1768-1771), expressed doubt that the original specimen described and named *Mus canguru* by Muller (1776) was a grey kangaroo. They suggested that it might have been a wallaroo of the *robustus* group. Later, the same authors (1937) endeavoured to show that it was really a whiptail or pretty-faced wallaby (*Wallabia elegans*). Again, this conclusion was based on Solander's manuscript, aided by the purchase of two skins collected near Cooktown on the Endeavour River, one a whiptail wallaby and the other an antilopine wallaroo. It is difficult to understand this decision. Solander's description is a composite one; parts of it (one of the weights, some measurements, a sex) can clearly be related to the holotype, while other parts have been taken from other specimens.

Raven (1939) then discussed the matter and held that the earlier revisers were correct in indentifying the first described specimen as a grey kangaroo. Morrison-Scott and Sawyer (1950) provided excellent support for this view, and they produced additional pertinent evidence that the type of *Mus canguru* Muller was a young grey kangaroo. These authors published (1) two outline sketches (indeterminable\*) of an entire kangaroo made by Parkinson, artist on board the *Endeavour*; (2) wash

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\* We have examined a coloured transparency (supplied through the Mitchell Library, Sydney) of a painting of a kangaroo by Stubbs which is probably the original of the figure in Hawkesworth (see Lysaght 1957). We are unable to identify it specifically with any species which nowadays occurs at Cooktown. Any attempt to establish that this figure and painting are of the holotype would be pointless. Muller specifically nominated the holotype by reference to its weight and there is no evidence that this figure represents the nominated animal.

drawings by Nathaniel Dance of a skull, which can be identified as that of *Macropus robustus*, a grey wallaroo; and (3) a photograph of a skull of a young grey kangaroo which they designated the "photo-lectotype" of *Macropus canguru* (Muller). This last skull was collected on Cook's voyage and was given to John Hunter by Banks, a member of Cook's party. It is No. 1732 in Owen's catalogue (1853) and No. 3703 in Flower's catalogue (1884). It is the skull of a young grey kangaroo and we believe that it is from the 38 pound specimen collected near the Endeavour River. Both Owen and Flower described this skull and its dentition.

Morrison-Scott and Sawyer have suggested that the largest of the three specimens collected, weighing 84 pounds, was a wallaroo of the *Macropus robustus* group, and now represented by the Dance drawings. The presence of a specimen of the wallaroo in Cook's collection would account for the statement by Solander in his composite description that the internal area of the kangaroo was naked. A juvenile grey kangaroo from Cook's voyage (presumably the specimen which weighed 8 pounds) was recorded by Gray (1843) as being preserved in spirits in the British Museum. It is no longer in the collections. The skull of the third animal, which was in the collections of the Royal College of Surgeons in London, was destroyed by a bomb and is now represented by a photograph in the British Museum and undoubtedly it is the skull of a young grey kangaroo, shown by us here to be from an animal weighing in the vicinity of 38 pounds, and certainly not 84 pounds.

The instability which now exists in the nomenclature of these well known kangaroos and wallabies is undesirable and can best be removed by proving the specific identity of the holotype which was nominated by Muller. Clearly, no consideration need be given to the 8 pound juvenile grey kangaroo which was in the British Museum; the holotype is either the Hunterian specimen or another, probably represented by the specimen drawn by Dance. It must be emphasised that Solander's composite description which was not published until 1925 is of no nomenclatural importance.

#### TOPOTYPICAL MATERIAL

Morrison-Scott and Sawyer lacked material from the type locality, and with this in mind, a party from the Queensland Museum, consisting of D. P. Vernon, S. Breeden and M. E. McAnna, collected in the vicinity of Cooktown, Endeavour River, during October and November, 1960. Among the specimens obtained are five grey kangaroos, seven grey wallaroos, six antilopine wallaroos, seven whiptail wallabies and ten agile wallabies.

A young male grey kangaroo (J.10749), collected at Kings Plains, November 24, 1960, by Vernon and Breeden, is nearest in weight to the 38 pound animal of the *Endeavour* party. Although it weighed 55 pounds, including viscera and stomach contents, its dental age is precisely that of the 38 pound animal. Another male

(J.10750), weighing 90 pounds, including viscera and stomach contents, was collected at the same locality. This specimen has all molars fully erupted, and not only has dP<sup>4</sup> been shed, but its successor (P<sup>4</sup>) also has been shed on the right side and is close to being shed on the left. It will be clear from these remarks that the 84 pound *Endeavour* specimen cannot have been the skull given by Banks to Hunter, and on the evidence afforded by the specimen (J.10749) in the Queensland Museum, it must have been the 38 pound animal. Furthermore, in addition to agreeing exactly in dental age, the limb measurements of the young male (J.10749) alone agree closely with those provided by Muller when describing *Mus kanguru*.

The exact stage of dental eruption reached by the Hunterian (38 pound) specimen was well described by both Owen and Flower. P<sup>3</sup> has been shed, dP<sup>4</sup> was about to be replaced by P<sup>4</sup>; M<sup>1</sup>, M<sup>2</sup> and M<sup>3</sup> were in place in the maxilla and M<sup>4</sup> was still in its crypt. The dentition of J.10749 is the same as will be seen from the accompanying plates.

It was not possible to establish on the recent Cooktown material the range of variation in weight which can be expected at this stage of dentition. However, for this purpose, Mr. W. H. Butler, Associate of the Western Australian Museum, collected a series of male grey kangaroos from a single population at Congelin, south-west Australia. Three of these were at the same dental age as both of the above, and their weights were 63, 68 and 79 pounds, a weight range of 16 pounds. The south-west grey kangaroo is a heavier animal than the north-east Queensland form, but the difference in minimum and maximum weights is similar to the difference between the 38 pound specimen of Cook's party and the Queensland Museum example, J.10749. It would appear that the 17 pounds difference is not significant.

Finally, in order to satisfy ourselves as to the probability of the identification of the skull of the Dance drawing with the 84 pound specimen, this (as reproduced in Morrison-Scott and Sawyer) has been carefully compared with skulls from the Endeavour River of the whiptail wallaby, the agile wallaby, the antilopine wallaroo, the grey wallaroo and the grey kangaroo, and it is clearly a specimen of the grey wallaroo. At first sight, the third upper incisor appears unusual until it is realised that Dance, in order to show the presence of the faint groove in the outer surface of the posterior lobe, has slightly overemphasized it. The skull drawn by Dance has a sectorial tooth followed by three fully erupted molariform teeth, and a partly open alveolus is shown behind the last molariform tooth. The cementum area of the root of the third incisor is well exposed and the pronounced supraorbital crests become confluent above the temporal fossa to form a sagittal crest. These growth characters support our identification of the teeth as P<sup>4</sup>, M<sup>1</sup>, M<sup>2</sup>, and M<sup>3</sup> (with M<sup>4</sup> in its crypt). Hawkesworth says of the 84 pound animal, that it was "not at its full growth, the innermost grinders not yet being formed." A male specimen of the grey wallaroo at this dental age (J.10738) was collected at Annan River, 17 miles south of Cooktown and it weighed 70 pounds.

The skull of the wallaroo drawn by Dance is very probably that of the 84 pound animal shot by Lieutenant Gore on July 27th, 1770. Its presence in the series would explain the presence of the characters which are atypical of the grey kangaroo in the composite description of Solander (e.g. the naked internarial region). The grey wallaroo is the only "grey" macropod in the area which possesses these characters and at the same time achieves a weight of 84 pounds. Further it should be noted that, of the five species collected at the Endeavour River in 1960, the male grey wallaroo is the only male form which is sufficiently nondescript externally to be included with a series of grey kangaroos without remark. Cook's party obtained two grey kangaroos, and male specimens of species other than the grey wallaroo are either widely different from the grey in colour or are, even to the untrained eye, brightly and obviously ornamented.

#### WHIPTAIL WALLABY

It has already been stated that the final decision of Iredale and Troughton that *Mus kanguru* Muller was based on a whiptail wallaby was not derived from an examination of Muller's description, but from an examination of a description contained in a manuscript by Solander, now in the British Museum. This description included both the male and female genitalia and the pouch, and the weights of three animals were given. The main characters stated by Solander and used by Iredale and Troughton were that the area between the nares was naked and that the third incisor was bilobed, broad from side to side and with smaller anterior lobes. As Morrison-Scott and Sawyer have pointed out, Solander's description of the incisors accords neither with the grey kangaroo nor the whiptail wallaby, but it is in accord with the condition in the wallaroo.

Solander also stated "Par intimum Molarium diu intra alveolus suos latit, in junioribus non discernandum," implying that both the 38 and 84 pound specimens had unerupted last molars. He referred to the 38 pound example as a male of two or three years, and to the 84 pound animal as "adultus." Similarly, Hawkesworth described the 38 pound animal as "a young one, much under its full growth." Elsewhere in the same work Hawkesworth made it clear that the term "full growth" referred to the possession of fully erupted molar teeth since he said of the 84 pound animal "We found that this animal was not at its full growth, the innermost grinders not being yet formed."

All male whiptail wallabies between 30 and 50 pounds in weight collected on the recent field trip to the Endeavour River had erupted last molars, as was to be expected. Externally, each individual has a prominent white stripe, approximately

12 mm. wide, extending from the nares to behind the eye on each side of the face ; another prominent white stripe, crescent-shaped, on each thigh ; and the fur under the head, centre of throat and entire abdomen is white. It is most unlikely that those who examined and described the first collected Macropodidae from Australia would ignore these vivid markings if the whiptail wallaby was represented in the collection.

#### CONCLUSION

From the above evidence, together with the evidence provided by Morrison-Scott and Sawyer, it would appear that the following specimens were collected in the vicinity of the Endeavour River, north-east Queensland, in July, 1770 by Cook's party.

- (1) A grey wallaroo, *Macropus robustus*, weighing 84 pounds. It is likely that from this specimen Solander in manuscript described the area between the nares as naked. Now apparently represented by a wash drawing of the skull by Nathaniel Dance in the British Museum.
- (2) A young grey kangaroo, weighing 38 pounds. This specimen, which had P<sup>4</sup> and M<sup>4</sup> still in their crypts, was described by Hawkesworth (1773) and described and named *Mus canguru* by Muller in 1776. Now represented by a photograph of the skull in the British Museum.
- (3) A juvenile specimen, weighing 8 pounds, a grey kangaroo. Recorded as preserved in the British Museum (Gray, 1843), but not now in the collections.

#### CONSERVING THE GENERIC NAME *MACROPUS*

*Macropus* is currently the generic name of the large-sized kangaroos, including the grey kangaroo, and it has been applied in this way for more than one hundred years. The genotype is *Yerboa gigantea* Zimmermann (1777) which is accepted as a synonym of *Mus canguru* Muller (1776).

The view of Iredale and Troughton is that the type of *Mus canguru* Muller was a whiptail wallaby, at present generally known as *Wallabia elegans*. To those who accept this view, the generic name *Macropus* must be used for the large-sized wallabies, and another name will have to be found for the large-sized kangaroos.

Since the case presented here rests, to some extent, on probability, in order to stabilize both the generic and specific names involved, we have decided to approach the International Commission for Zoological Nomenclature with the following request :—

- (1) That the specimen, the skull of which was given by Sir Joseph Banks to John Hunter and became No. 3703 in the collections of the Royal College of Surgeons, London, be declared the holotype of *Mus canguru* Muller 1776; that since this specimen has been destroyed, it be replaced by a neotype, a grey kangaroo, Queensland Museum No. J.10749, male, skin and skull, collected at Kings Plains, 20 miles south of the Endeavour River, November 24, 1960, by D. P. Vernon and S. Breeden.
- (2) That a procedure be adopted to make the name *Yerboa gigantea* Zimmermann 1777 an objective synonym of *Mus canguru* in accordance with the current usage of these two names.
- (3) That the name *Macropus major* Shaw 1800 be conserved for the grey kangaroo with type locality Sydney as restricted by Iredale and Troughton (1934). According to Article 72d of the International Code, *Macropus major* has the same type specimen as *Yerboa gigantea* and the Plenary Powers will have to be exercised in order to validate the action of Iredale and Troughton.

If the Commission accepts this recommendation, the generic name *Macropus* will continue to be available for the large-sized kangaroos; *M. canguru* will be the name of the grey kangaroo; and *major* will be available for the grey kangaroo of Sydney and beyond should it prove to be subspecifically distinct from the Endeavour River, north-east Queensland grey kangaroo.

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## EXPLANATION OF PLATES

*Macropus canguru*, Grey Kangaroo

- Plate V. Doral view of skull.
- Plate VI. Ventral view of skull.
- Plate VII. Lateral view of skull.
- Plate VIII. Mandible.

All views of same skull, J.10749, male (Q.M.). All natural size.

Specimen from Kings Plains, 20 miles south of Cooktown, N.E. Queensland.